North Central Montana
Rural Nursing Education Partnership

Final Pilot Project Report

November 2005

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Final Report
North Central Montana Rural Nursing Education Partnership
Executive Summary

In response to requests from health care agencies in North Central Montana for locally based coursework that could prepare students to enter a variety of health care profession programs, President Gamble charged the dean of the Montana State University-Bozeman College of Nursing with developing a working model that would address both immediate and long-term rural nursing needs, at all levels, in North Central Montana. Following a series of collaborative meetings between MSU system nursing educators and area rural health care facilities, a rural nursing education model was developed and presented as a pilot project to the Montana State Board of Nursing in April 2002. This pilot project was conducted collaboratively by MSU-Bozeman College of Nursing and MSU-Northern Department of Nursing from January 2003 through May 2005. Eighty-eight students expressed interest in participating, 39 actually enrolled in phase one classes and 7 students graduated with associate degrees in nursing. All seven successfully passed the registered nurse licensing examination and are employed. Income from tuition and fees did not meet the costs of the program; start-up and additional costs were covered through agency and partner contributions and in-kind contributions from the two nursing programs. Eleven recommendations are presented:

1. Maximize the use of on-line courses for general education and pre-requisites. This would reduce costs for both students and the institutions, and increase flexibility for students. Many of these courses already exist on-line at Montana State University institutions.

2. Ensure clear communication with involved communities and prospective students to ensure they know the intent of the project and the limits of available programming.

3. Distinguish between the preparatory courses for professional (baccalaureate level or higher) and technical (associate degree or certificate level programs) programs so that students are not frustrated as they continue to pursue their chosen professional path.

4. A ladder nursing education program, that is a program designed to articulate seamlessly from the LPN through the RN level including a baccalaureate completion component, will provide an approach that appears to be more compatible with the desires of both agencies and students in remote areas.

5. Hire an on-site coordinator for the duration of the program. A local coordinator is critical to ensure good communication with students and educational and clinical partners.

6. Qualified faculty must be employed for all phases of the model (including prerequisite courses if offered on-site).

7. A minimum of 1.5 faculty FTE (including a full-time medical surgical faculty member and a quarter-time psychiatric nursing faculty member and additional nursing specialty faculty) are needed in addition to the program coordinator.

8. Do not run the program with faculty on overload. Teaching assignments should be included in the overall faculty credit workload for the academic year, rather than as additional (overload) workload.

9. Guidelines for rural agency staff and administrators regarding the delineation of instructor, staff, and student roles need to be established to ensure students receive clinical assignments that will meet course and clinical objectives.

10. A dedicated classroom with sinks, manikins, and computer technology would enhance local clinical instruction and limit the need for faculty to transport cumbersome teaching/learning equipment and materials.

11. Secure external funding for the program. Funding to cover the costs of the program needs to be generated either through extramural (grant funding), allocation from the Board of Regents, state appropriation, or by setting tuition and fee costs at a level that will cover the costs of the program.

November 15, 2005

North Central Montana Rural Nursing Education Partnership
Final Pilot Project Report

Charge

"(Using) the concept that was developed by MSU-Northern to expand their AS/RN program to Shelby as a starting point, …develop a working model that will address both immediate and long-term rural nursing needs, at all levels, in North Central Montana."

Memo from President Gamble, May 1, 2001 (Appendix A)

Introduction

The charge to the MSU nursing programs from President Gamble in May 2001 was prompted by increased difficulties noted by North Central Montana health care agencies in recruiting and retaining an adequate supply of nursing personnel. MSU-Northern Department of Nursing was contacted to consider providing their nursing education program in Shelby, Montana. The presidential charge outlined the dual purposes of assisting in both short and long term strategies to address the rural area nursing shortage as well as the broader goal of creating a coordinated state-wide approach to nursing education. Short term strategies included assessing factors that impacted recruitment and retention of licensed nurses in the North Central Montana (NCMT) area, potential rural employment interest on the part of current nursing students in the NCMT area, and the status of the health care environment in the six rural counties of the region. Following a series of collaborative meetings between MSU system nursing educators and area rural health care facilities, a rural nursing education model was developed and presented as a pilot project to the Montana State Board of Nursing in April 2002. This pilot project was conducted collaboratively by MSU-Bozeman College of Nursing and MSU-Northern Department of Nursing from January 2003 through May 2005. This document will provide a comprehensive review of the pilot project goals, outcomes, and recommendations for future provision of rural nursing education in Montana.

Review of Literature

The issues surrounding the national shortage of nurses are complex, interrelated, and fall onto both sides of the supply and demand equation. An aging workforce, the many changes in our health care system, advanced technologies, and the dissatisfaction regarding workplace issues are reasons most often cited by nurses who leave the profession (American Association of Colleges of Nurses [AACN], 2005). These factors illustrate the need for collaboration between nursing education, health care delivery, and the work environment. The rural health care setting is particularly challenged in the recruitment and retention of competent nursing staff. There is need to identify both strategies to both improve the health care work environment in order to retain nurses and recruit new nurses to remote rural areas of Montana. According to MacPhee and Scott

(2002), rural nurses expect more guidance from management than their urban counterparts. Further, Huntley (1995) noted that a preference for country life, job satisfaction, a supportive network of peers, and access to continuing education were key factors affecting nurses who sought and stayed in rural nursing. This challenging picture for rural agencies is compounded by the U.S. Bureau of Labor Statistics projection that the need for registered nurses will grow faster than for any other occupation through 2012 (AACN, 2005).

While nursing education plays a pivotal role in recruiting and educating potential nurses, the solution to the shortage in both rural and urban areas requires efforts on the part of both the educational and service sectors. Kenny and Duckett (2003,) note "the key to long term recruitment and retention in rural areas is educating staff to ensure that they are confident to manage the complexities of rural practice." In fact, the rural setting requires nurses to provide a diverse and expert level of nursing care. It is not uncommon in small rural hospitals to have one registered nurse overseeing the emergency room filled with victims of a motor vehicle accident, a woman in labor, or a patient being monitored for a possible acute myocardial infarction. The knowledge, skills, and ability of the registered nurse must be broad to deal with this scenario safely. Peters (1993) further notes that while nursing graduates who come from a rural setting are more likely to return to practice in the rural setting, the unique characteristics of rural nursing students should be identified and supported in order to help them succeed and keep them in school. The author delineates these characteristics as: a reluctance to initiate interaction and seek help from faculty, fewer educational resources; and bright students who may not have been academically challenged in high school and as a result may lack efficient study skills. Knowing these potential characteristics suggests the need for early contact, consistent faculty involvement, mentoring, and additional educational resources. Additionally, Neill & Taylor (2002) noted that the use of rural clinical experiences positively influenced an interest in returning to rural nursing after graduation, however, many felt financially disadvantaged by the added expense of a rural clinical rotation. The authors identify financial support for students as an effective recruitment and retention tool.

The responsiveness of nursing education to meet the demand for more nurses is complicated by opposing forces. Enrollment in entry-level baccalaureate nursing programs across the nation rose 10.6 % in 2004 over the previous year and by 16.6% in 2003, yet nearly 26,340 qualified applications were denied admission primarily due to the shortage of nurse educators, appropriate clinical placement sites, and classroom space (AACN, 2004). While the struggle to expand capacity without jeopardizing quality is ultimately limited by the availability of qualified nurse educators, the use of collaborative efforts with practice partners, accelerated programs, and education articulation agreements are being utilized to increase student capacity. Distance learning technology to facilitate rural nursing education has been used successfully in South Dakota; however, this has not been accomplished without significant external financial support. The partnerships of health care agencies, rural communities, the state's Department of Labor, and educational institutions obtained a $2.7 million federal grant and in-kind services to bolster rural health care education in nine medically underserved communities. Of the original 172 participants, the resulting pilot project graduated 88 new nurses and 10 new allied health graduates to the workforce in the project's second year (Morse, 2004).

Funding was utilized to support connectivity costs associated with distance delivery and student tuition and fees.

In summary, strategies employed to focus nursing students toward rural nursing employment upon graduation must include an emphasis on quality education with a broad compliment of patient care experiences. The use of financial support for students and programs significantly enhances the overall success.

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Overview of 2002 Recommendations

The 2002 report of findings and recommendations in response to President Gamble's charge concluded that while the actual number of nursing vacancies in the north central Montana area was relatively small, even 1-2 vacancies in a rural facility can prove to be problematic. A survey of licensed nurses in the area identified adequate compensation and satisfaction with working conditions as key negative factors in the retention and recruitment of qualified nursing staff. There appeared to be interest from area residents in attending a registered nursing educational program and the desired educational level by the health care agencies slightly favored baccalaureate over associated degree nursing education. Nursing educators from the partner educational institutions identified limited clinical opportunities in the north central Montana area, and concluded that most of the nursing courses would require additional clinical sites outside of the rural area. It would be possible, however, given current available distance technology, to provide general education courses at a rural site or via the Internet.

The resulting recommendations focused on strategies that should be employed by rural health care agencies. These included incentive packages to graduating nurses, the use of clinical internships, and the need to address internal working conditions by directly involving nurses. Recommendations for the MSU nursing programs included the formation of a consortium of general, nursing, and allied health educators to develop a pilot rural nursing education model that would produce an available workforce for the rural area.

Rural Nursing Education Pilot Project

The consortium of general, nursing, and allied health educators and partner health care agencies designed a model to educate place bound students in north central Montana. The primary goals for the pilot project was to provide quality health care education within the limited resources of the MSU system through collaboration between the MSU nursing and general education programs in the north central Montana area and to develop a distance delivery educational model that was financially feasible for the MSU system. An additional goal was to develop a "portable" program that could be used to address health care personnel shortages in any community of similar size. Implementation strategies focused on ensuring that adequate resources were available and accessible in order to meet individual course and clinical objectives, that qualified faculty were utilized in all phases, and that the plan of study would optimize student options for health care education.

Rural Nursing Education Pilot Project

Phase I Summary

Phase I consisted of general education and pre-requisite nursing courses offered by MSU Northern. These courses were conducted primarily in Shelby, Montana at the Shelby High School. A pilot coordinator was employed from January through December of 2003 to assist students through the application, financial aid, and scheduling processes.

Thirty-nine students entered this phase of the project. In October 2003, ten students were selected though MSU Northern's placement process for the cohort that would complete the pilot program through Phase III. An additional eight students were eligible to continue taking Phase II courses and apply for placement in other health care educational programs.

Phase II Summary

Phase II consisted of foundational nursing courses provided by faculty members from MSU-Bozeman College of Nursing Great Falls and Bozeman Campuses during the fall semester of 2003 and spring and summer semesters of 2004. Seventeen students took N115 Nursing as a Profession via WebCT, an online class, and eighteen took N224 Pathophysiology via REACH, a distance interactive video system connecting Montana's rural hospitals. Twelve students were enrolled in N280 Fundamentals of Nursing Process during summer semester. This course was provided in a face to face lecture and college lab format with WebCT enhancement. Eleven students passed this course successfully, nine of whom had already received Phase III placement. Of the remaining two students, one subsequently was given placement for Phase III and the other moved from the area.

Phase III Summary

Phase III consisted of Level Two associate degree nursing courses provided by faculty members from MSU-Northern Department of Nursing during the summer and fall semesters of 2004 and spring semester of 2005. Clinical capacity limitations allowed for a cohort of 10 students to enter this phase. One dropped out and entered an LPN program in Great Falls and two eventually withdrew due to pending academic failure and medical reasons. All but one course was delivered face to face, requiring faculty to travel to Shelby for concentrated blocked lecture periods. As anticipated, the lack of available, consistent, and complex patient populations further limited on-site clinical experiences and required students to travel to Havre and Lewistown. Seven students completed all degree requirements, passed exit exams, and were eligible to sit for the NCLEX-RN exam (*See Appendix 1 for the program of study and Appendix 2 for course syllabi).*

Outcome Measures

Access to health education in rural north central Montana State University

A variety of methods of course delivery were used to provide courses throughout the pilot program. Survey data illustrated an overwhelming preference on the part of students and faculty for on-site faculty and a face to face lecture format, however, when this was not available, students generally agreed that they were grateful for the opportunity to have access to the education *(See Appendix 3, Phase III Student Survey).* Students preferred on-line courses to the variety of interactive video modalities. Faculty also preferred face to face over other modalities *(See Appendix 4, Phase III Faculty Survey).* There were additional costs associated with use of interactive video conferencing for both students and programs, and there were additional costs associated

with sending program faculty to the rural sites for face to face lectures. Many students needed to travel from their own rural community to classes several nights per week.

Recruitment, Preparation and Retention of qualified healthcare professionals

To provide a broad perspective on the evaluation of the NCMT project, administrative representatives from three of the participating healthcare institutions were interviewed. A fourth institution was contacted repeatedly; however, no interview was ever managed. Those who did participate were asked the following questions: What did this project mean to your community? Did the project increase the quality of health care or health care professionals in your community? Did it decrease your vacancy rate? What were your expectations for the project, and did it meet your expectations? If it were done again, what would you suggest be done differently? And finally, if there were sufficient interest, would your agency be willing to contribute financially to the program?

The following is a summary of the data obtained from the interviews. All respondents indicated that the project was a good idea in that it would help individuals within the community to advance and it would help the local community deal with concerns about RN shortages. Enthusiasm was greater from those communities that actually had students in the program and/or who subsequently were able to employ the graduates of the program. All felt that the opportunity for place-bound individuals to obtain education at the RN level was important. All expressed disappointment that the project was not on-going. All indicated an initial expectation that it would be ongoing and that the project would prepare students to enter more than just the nursing program. Areas that were identified for improvement included, better communication about the purpose and the duration of the project, better student advising (a problem initially), use of Internet based courses rather than on-site courses for the non-nursing prerequisites, more attention to the initial intent of delivering a set of prerequisites that would lead to a variety of health professions programs, not just nursing, better use of the telemedicine capabilities of the hospitals, ensuring representation from all participating communities in the group selected for the nursing component, and better use of local facilities and staff for clinical experiences and student supervision (it was acknowledged that the rural hospitals could not provide all of the clinical experience because they simply did not have the specialty area patient volume). Strengths of the program were its local availability, relationships that were developed with the University and with individual faculty, and the ability to recruit graduates for the local communities.

Two of the agencies indicated willingness to support financially additional offerings. The third (from a community that did not have any students) indicated that they would have to balance such a contribution against an ongoing, successful scholarship program to determine cost-benefit ratio. All indicated interest in having ongoing, although not necessarily annual, programming.

Student survey data indicated that one of the students received an individual incentive package or financial support from a health care agency during the project, and this was tied to employment. In-kind support was provided in the form of classroom space, computer access, and startup funds from several agencies. Student internships were not offered by the agencies, however the model's back-to-back seven semester curriculum really did not allow for this kind of opportunity. The state of the rural health

care agency working conditions was not re-assessed following the project, however, two agencies indicated that they were able to recruit from the graduating class and so expect to reduce turnover and vacancies. The third agency indicated that a nursing shortage was not a problem at their facility.

NCLEX Pass Rate

One of the primary outcome measures of this pilot project was the NCLEX-RN pass rate of the graduating cohort. All seven students who completed the pilot project have taken and passed the NCLEX-RN national examination.

Attrition

The attrition was significant during all three phases of the pilot. Initially, 88 students indicated interest in the program, 39 enrolled in all or part of Phase I, 18 applied for Phase II nursing program placements of whom 10 were selected and entered Phase III. Seven students completed the program. Reasons for attrition included academic failure, scheduling conflicts, personal issues, and medical reasons *(See Appendix 5, Attrition Report).* Three students transferred to MSU-Northern to complete an ASN on the Havre campus. One student transferred to the LPN program in Great Falls.

Outside of the pilot project, there were continued opportunities in rural clinical placement for management and community health for senior BSN students in Shelby and other area rural health care facilities. Several of these agencies participated in the early development of the project, but did not continue with the actual pilot activities. Two career fairs were held by agencies to recruit new graduates from area nursing and allied health programs.

Provision of quality general and health care education

Classroom and college lab resources were available for each course. Most of the classes were held in Shelby at the high school or at the Marias Medical Center. There was adequate space, but there was some difficulty noted with the computers and printers in the computer course, the need for LCD/laptop equipment with the REACH system, and the need to mock up a skills lab setting for the foundational nursing course.

While all participants had access to telecommunication networks, eg., REACH and Northnet, these networks did not connect, thus it was often impossible to deliver coursework over the interactive television systems.

Travel was extensive for both students and faculty. Faculty traveled up to 200 miles round trip to teach each lecture period, and some students traveled nearly 200 miles round trip to attend each class. Clinical experiences required students to travel as far as 400 miles round trip and stay overnight. A summary of student expenses estimates students paid $3872 in additional expenses for the program. MSU-Northern Department of Nursing paid $7,785 in additional travel costs for faculty and MSU-Bozeman paid $6266 for MSU-Bozeman faculty and administrative travel.

The schedule of courses was identified by some students as a problem in Phase I and students who completed the program voiced regular concern for the need to know

well in advance when courses would be scheduled in order to make family and personal arrangements. Lack of advanced scheduling became a source of much frustration for students.

Faculty noted that the necessary variety and complexity of patient populations needed for Phase II and III courses were not consistently available in Shelby, thus students had to travel to Havre and Lewistown for some clinical lab experiences. The only clinical experience offered in Shelby was an approximately two week period for experiences in the long-term care and primary care settings. Lewistown was used for mental health clinical experience as the rural areas in the six county region do not provide in-patient acute or chronic mental health services. Faculty expressed concern over some agency staffing adjustments made while students were on a unit. There appeared to be unclear expectations on the part of the agency about the role of the instructor to assign students to appropriate patients designed to meet course and clinical objectives.

Program administrators experienced some difficulty in securing qualified faculty to teach in each phase. Phase I relied on some local secondary high school educators to provide general education courses. Several of these faculty had no post secondary higher education teaching experience and the level of professional education varied among the faculty *(See Appendix 6, Faculty CVs).* All nursing faculty were qualified and approved by the Montana State Board of Nursing, however, adjustments to course scheduling (blocking and condensed lecture schedules) were made to accommodate the availability of nursing faculty due to late resignations. All nursing teaching loads for the project were in addition to the faculty member's usual workload or carried out during the summer.

The plan of study was intended to maximize student options to enter a variety of available health care education programs. Eight students capitalized on needed general education courses for other higher education programs, and two students transferred to an LPN program. Two adjustments were made to the original plan of study. As all of the students had decided to pursue the associate degree program at MSU-Northern, that institution chose not to offer Chemistry 111 in Shelby as long as it received approval for this curricular change *(See Appendix 7, Variance Letter)*. Students were aware that should they desire BSN education from MSU-Bozeman at a later date they would need this course. Additionally, MSU Bozeman's curriculum changed from the time the model was created until the time when Phase II courses were to be offered. As a result, MSU-Northern provided the health assessment course (N322) and a hybrid course combining nursing process and nursing fundamentals was created and offered by MSU Bozeman. Students were not disadvantaged by the changes made to the original plan of study.

Financial feasibility of a distance delivery health care education model

Detailed financial data from the pilot project is contained in Appendix 8. Initially the various agency partners contributed $16,000 and the Montana State University schools contributed $28,933 to start the program. This included funds to hire a project coordinator. Although this position was useful to both students and programs in facilitating communication, funding for the position was not continued after the first year. Revenue generated from tuition was $119,405, although this was not directly returned to the two nursing units. Some costs such as faculty travel, salary supplements for overload, salary to teach the on-line course, and administrative time came from the ongoing

departmental budgets and so are reflected as in-kind contributions. Actual income to the project from all sources (agency contributions, tuition, MSU-Bozeman's President's Office contribution) was $221,482; expenses were $248,952. The excess of expenses over income was covered through in-kind contributions, mostly from the MSU-Bozeman College of Nursing. It is evident that the costs of the pilot project exceeded the income, and most importantly, significantly exceeded the revenue generated from tuition and distance delivery fees.

Additional Questions Raised by this Model

The intent of the model was that after completing the prerequisite courses, students could seek admission to a variety of health care professional programs, some delivered by distance techniques, others offered on campuses of various institutions. Given a limited number of students, the question of feasibility of multiple options is significant. In this case, all the students selected the associate degree nursing program, however, had one-half elected the baccalaureate nursing program and one-half the associate degree program, class size would have been so small as to make offering either program on-site impossible. Similarly, the range of options that can be made available on-site (by any mechanism) does relate to the size of the group seeking that option.

Conclusions

1. The attempt to mesh two curricula – that of MSU-Northern and of MSU-Bozeman was not successful. The curricula had very different philosophical and educational approaches and different lower division outcomes. Prerequisites, general education requirements, and nursing curriculum patterns and expectations varied significantly at the lower division level, thus making a common science, general education and nursing fundamentals base extremely difficult to attain.

2. As anticipated, rural hospitals did not have the census or complexity of medical problems to all a complete educational experience. Off-site clinical experiences are needed to supplement those available in small rural facilities.

3. Students and faculty consistently preferred face to face instruction to distance delivered modalities.

4. The added requirements of the program on faculty at MSU-Bozeman and MSU-Northern had a negative impact on the programs at those home campuses.

5. The lack of masters-prepared nurses to serve as faculty at the distant sites severely taxes existing full-time faculty from regional programs as they are tapped to assume the instruction of the distant program at the same time they are meeting the instructional needs of their primary program.

6. The cost of delivering registered nursing education in this model exceeds the income generated from tuition and fees.

7. It was difficult to sustain the initial intent of providing a base of prerequisites for students to pursue a variety of health profession programs.

Recommendations

1. Maximize the use of on-line courses for general education and pre-requisites. This would reduce costs for both students and the institutions, and increase flexibility for students. Many of these courses already exist on-line at Montana State University institutions.

2. Ensure clear communication with involved communities and prospective students to ensure they know the intent of the project and the limits of available programming.

3. Distinguish between the preparatory courses for professional (baccalaureate level or higher) and technical (associate degree or certificate level programs) programs so that students are not frustrated as they continue to pursue their chosen professional path.

4. A ladder nursing education program, that is a program designed to articulate seamlessly from the LPN through the RN level including a baccalaureate completion component, will provide an approach that appears to be more compatible with the desires of both agencies and students in remote areas.

5. Hire an on-site coordinator for the duration of the program. A local coordinator is critical to ensure good communication with students and educational and clinical partners.

6. Qualified faculty must be employed for all phases of the model (including prerequisite courses if offered on-site).

7. A minimum of 1.5 faculty FTE (including a full-time medical surgical faculty member and a quarter-time psychiatric nursing faculty member and additional nursing specialty faculty) are needed in addition to the program coordinator.

8. Do not run the program with faculty on overload. Teaching assignments should be included in the overall faculty credit workload for the academic year, rather than as additional (overload) workload.

9. Guidelines for rural agency staff and administrators regarding the delineation of instructor, staff, and student roles need to be established to ensure students receive clinical assignments that will meet course and clinical objectives.

10. A dedicated classroom with sinks, manikins, and computer technology would enhance local clinical instruction and limit the need for faculty to transport cumbersome teaching/learning equipment and materials.

11. Secure external funding for the program. Funding to cover the costs of the program needs to be generated either through extramural (grant funding), allocation from the Board of Regents, state appropriation, or by setting tuition and fee costs at a level that will cover the costs of the program.

APPENDICES

Appendix 1
MSU-RURAL NURSING PARTNERSHIP
JOINT PLAN OF STUDY

Semester I (Spring 2003)		**Semester II (Summer 2003)**	
CIS 110 Introduction to Computers	3 crs	BIOL 241 Anatomy & Physiology I	4 crs
ENGL 111Written Communication	3 crs	SPCH 141 Fundamentals of Speech	3 crs
Math 094 Developmental Math	3 crs	*PSYC 205 Human Growth & Dev	3 crs
TOTAL CREDITS	**9 crs**	**TOTAL CREDITS**	**10 crs**
Semester III (Fall 2003)		**Semester IV (Spring 2004)**	
BIOL 242 Anatomy & Physiology II	4 crs	N115 Nursing as a Profession	2 crs
CHEM 112 Physiological Chemistry	3 crs	N224 Pathophysiology	3 crs
MATH 110 Math for Liberal Arts	4 crs	BIOL 217 Microbiology	4 crs
PSYC 101 Introduction to Psychology	3 crs		
TOTAL CREDITS	**14 crs**	**TOTAL CREDITS**	**9 crs**
Semester V (Summer 2004)		**Semester VI (Fall 2004)**	
N280 Fundamentals of Nursing Process (2/2)	4 crs	NURS 250 Adult Health/Illness Needs I	6 crs
NURS 322 Health Assessment	3 crs	NURS 251 Maternal Child Health/Illness Needs	7 crs
NURS 220 Psychiatric Mental Health/Illness	4 crs		
TOTAL CREDITS	**11 crs**	**TOTAL CREDITS**	**13 crs**
Semester VI (Spring 2005)		**<u>Total Credits</u>**	
NURS 252 Adult Health/Illness Needs II	6 crs	MSU - Northern (General Education)	37 crs
NURS 253 Adult Health /Illness Needs III	6 crs	MSU Bozeman (Foundations Nursing)	9 crs
NURS 254 Principles of Nursing Practice	1 cr	MSU - Northern (Nursing)	33 crs
TOTAL CREDITS	**13 crs**	**TOTAL CREDITS**	**79 crs**

Appendix 2
Course Syllabi

Appendix 3
Pilot Phase III Student Survey Summary

Note: Not all items reflect 7 responses as only 4 of the 7 graduates responded to the final survey. In cases where the data were known to the project evaluators, data were added, thus making a total of 7 responses on those items.

Demographics

Summary: All of the respondent students are between 20 and 39 years of age, married and with children.

- Age

20-29	30-39	40-49	50+
3	**3**		**1**
43%	**43%**		**14**

- Marital Status

Married	Single
7	
100%	

- Children

Yes	No
6	
86%	

Course Delivery

Summary: Students were generally satisfied with the face to face course delivery, the amount of clinical time, and their perceived level of preparation to sit for the NCLEX-RN exam in Phase III.

Likert Scale
1 = Very Satisfied, 2 = Somewhat Satisfied; 3 = No Opinion; 4 = Somewhat Dissatisfied; 5 = Very Dissatisfied

Face to Face	Amount of Clinical Time	Preparation for NCLEX-RN
1.75	**1.5**	**1.75**

Comments

- *The blocks were too short and condensed. It was hard to learn and retain all of the material.*
- *I appreciated the face to face class meetings and felt I learn better that way opposed to teleconference or internet classes.*
- *Thought a lot of the lecture time could have been online.*
- *Clinical time and experience were good. It would have been nice to have more local clinical time!*
- *[I feel prepared] due mostly to self-study!*
- *I will be attending an NCLEX review course in June.*

Program Delivery

Summary: There was overall similar satisfaction rated by the respondents. Communication and the quality of course instruction were assessed lower during Phase III, and the students felt better prepared coming into Phase III than Phase II.

Likert Scale
1 = Very Satisfied, 2 = Somewhat Satisfied; 3 = No Opinion; 4 = Somewhat Dissatisfied; 5 = Very Dissatisfied

	Communication	Quality of Course Instruction	Preparation from previous Phase	Overall Satisfaction
Phase III	**3.75**	**2.5**	**1.75**	**2.25**
Phase II	**2.63**	**1.81**	**1.90**	**2.27**

Comments

- *Thought MSU-N could have communicated better. We (I) was told information incorrectly by staff; communication amongst MSUN staff needs to improve.*
- *[quality of instruction] ~ fair is a better description. If I wasn't a self-motivated person I probably would not have passed the nursing program.*
- *MSU-Bozeman did an excellent job preparing us for the next level. I thought that the instructors were well –prepared and make an excellent effort at teaching me.*
- *Although the communication was a big issue and the fact that you really did have to "be on the ball" if you wanted any sort of structure/schedule. I mean we had to seak [sic] out our class & clinical schedules; we had to call the school to find out when our ATI's were being given, etc. I appreciate the opportunity and am greatful [sic] but better organization within the program would improve this program.*
- *I felt that communication could have been better between faculty and students. Some instructors could have been more organized.*
- *There were certain things that could have been improved such as communication, overall I felt that I received a good nursing education and am extremely thankful that I had a part in the MSU rural nursing partnership program.*
- *There was communication? I didn't notice.*
- *Instruction was good considering the condensed time. Most was self-study.*
- *I felt very privilidged [sic] that the program came to Shelby but there were many dishonesties and no communication. Students were put in akward [sic] positions and made to feel like liars and cheaters. The level of trust is terrible. There was no communication between the university & the students! I am thankful for the education but disapointed [sic] in many parts of the program.*

Financial Student Support

Summary: One student reported receiving financial support from an area agency which was tied to future employment.

Receiving Financial Aid from Agency	Tied to Employment
1	**Yes**
14%	

Employment Plans post graduation

Summary: More than half of the responding students have not made any decision about post graduation employment. The other half has accepted employment at an area agency. Salaries ranged between $18.00 and $22.00 per hour.

No Plans	Crossroads Correctional	North Central MT Area (Shelby, Chester, Conrad)
2	**1**	**1**
50%	**25%**	**25%**

Comments

- *Thank you for providing me with the chance to obtain my nursing degree.*

Appendix 4
Phase III Faculty Survey Summary

Faculty Qualifications

- Formal Preparation [N=5]
  - Masters 4
  - Doctorate 1

- Previous higher education teaching experience ~ all faculty members had previous teaching experience at this level.

Method of Course Delivery

- All but one course was delivered using a face to face lecture format. On-line was utilized for the last course.
- Two faculty identified that some students were not happy with the block scheduling or the need to go to Havre for clinical experiences.
- Two faculty identified the difficulties associated with the course delivery. Travel to the rural site became difficult in the winter and the need to haul large amounts of material back and forth was troublesome. The felt student had too much information upfront to retain.
- All lecture times were held at the Marias Medical Center conference room both semesters.
- Classes that were blocked lacked an opportunity for students to integrate theory with practice. The long lecture periods were difficult for faculty and students. One faculty noted the difference in the type of educational preparation from Phase II.
- Most faculty felt the classrooms resources were adequate, but one identified the lack of resources available other than what she transported with her.
- The amount of travel was unacceptable to all but one faculty person.
- The lab resources were generally adequate, but required students to travel to Havre and Lewistown.
- Faculty identified limitations to the clinical resources on-site. These included low, fluctuating, inconsistent, or marginal census. Complex experiences (high risk labor, NICU and peds patients) were not consistently available.
- Faculty felt students were not comparable to the level of other MSUN students. They were clinically behind and lacked experience with care planning.
- The long term care and primary care clinic was used for a two week period in the last semester. The faculty noted that unit staffing was reduced during this period because they had students. This proved problematic when students were off the unit for clinical conferencing with the instructor.
- Faculty identified student commitment and quality education as strengths of the model.
- Communication and travel were the model's overall weaknesses. One faculty noted a potential setup for student failure with the blending of BSN and ADN curriculums. This left students ill-prepared for either level of clinical experiences.

Appendix 5
Attrition Report

Attrition Summary

Program Development Points	***Number of students***
Initial student interest	88
Chose not pursue course work	32
Students interested in courses for other programs	17
Needed 1-2 classes for other programs	8
Unable to make initial contact	9
Students enrolled during all of part of Phase I	39
Quit for Personal reasons	8
Scheduling conflicts	2
Moved from area	2
Lost contact	1
Active student enrollment as of December 2003	26
Applied for Nursing Program Placement (10/03) (cohort of 10 chosen by MSU-N)	18
Active enrollment completing Phase II	12
Attrition, PhaseII	
Withdrawal to avoid academic failure	2
Academic failure	2
Additional students added to Phase III	
LPNs seeking LPN to RN articulation	2
Active enrollment entering Phase III	10
Denied due to clinical capacity limitations	2
Transfer to LPN program	1
Withdrawal due to pending failure	
Withdrawal for medical reasons	1

Attrition Detail

Spring 2003

- CIS 110, ENGL 111, Math 094
  27 students completed one or more the of the courses offered

Grade distribution	A	B	C	I	P	F
CIS 110	22	2				
ENGL 111	3	12	3	1		
Math 094					16	2

Summer 2003

- BIOL 241, SPCH 141, PSYC 205

Enrollment in one or more courses 32

Attrition data:

Moved from area ~	1
Scheduling conflict	2
Classes not needed	1
Health	1
Did not want nursing	1
Lost contact	1

Grade distribution	A	B	C
BIOL 241	4	8	5
SPCH 141	5	7	2
PSYC 205	6	4	3

Fall 2003

- BIOL 242, CHEM 112, MATH 110, PSYC 101

Enrollment in one or more courses	28
Applications for placement	18
Desiring part-time pace	4
LPN articulation	1
Desiring other programs (not nursing)	5
Attrition data:	
Moved from area	2
Schedule conflicts	2
Classes not needed	3
Personal reasons	9

Grade distribution	A	B	C
BIOL 242	4	6	7
CHEM 112	3	5	9
MATH 110	8	5	2
PSYC 205	6	4	3
N115[BZ]	2		

Spring 2004

- N115, N224, BIOL 217

Enrollment in one or more courses ~ 23

Attrition data:

Withdrawal ~ 2

Course failure ~ 2

Grade distribution	A	B	C	D	W
N115[BZ]	8	4	3		
N224[BZ]	6	3	5	2	2
BIOL 217	3	5	7		

Summer 2004

- N280[BZ], NURS220, NURS332

Enrollment in courses 12

Attrition data:

Course Failure 1

Course Incomplete 1

Grade Distribution	A	B	C	D	F	W	I
N280	6	3	2		1		
NURS 220	3	3	5				1
NURS 332	10	2					

Fall 2004

- NURS 250, NURS 251

Enrollment in courses 9

Attrition data

Withdrawal (pending failure) 1

Medical 1

Did not receive clinical placement 3

Grade Distribution	A	B	C	D	F	W	I
NURS250	1	4	2			2	
NURS251		4	4			1	

Spring 2005

- NURS 252, NURS 253, NURS 254

Enrollment in courses 7

Grade Distribution	A	B	C	D	F	W	I
NURS252	5	2					
NURS253	1	6					
NURS254	5	2					

Appendix 6
Faculty CVs

Appendix 7
Variance Letter

Appendix 8
Financial Report

Consolidated Financial Report NCMT Project

	FY 03	FY04	FY05	Total
Income				
MSU-Northern				
Tuition	$ 14,561	$ 45,395	20,426	80,382
MSU-Bozeman				
Tuition		$ 18,101	20,922	39,023
MSU-College of Nursing	$ 8,933	$ 550	47,628	57,111
MSU-President's Office	$ 10,000	$ 36,436		46,436
MSU-Northern	$ 5,000			5,000
MSU-COT-Great Falls	$ 5,000			5,000
Marias Medical Center	$ 10,000			10,000
Pondera Medical Center		$ 3,000		3,000
Liberty County Hospital		$ 3,000		3,000
Total	**$ 53,494**	**$ 106,482**	**88,976**	**248,952**
Expenses				
Instruction MSU-Northern	$ 6,624	$ 43,729	68,157	118,510
Start-up NCMT	$ 5,000			5,000
Operating NCMT			34,402	34,402
Start-up MSU-Bozeman	$ 35,249	$ 22,437	5,801	63,487
Instruction MSU-Bozeman		$ 18,231	9,322	$27,553
Total				**$248,952**

Comparison of tuition revenue and program costs (not including start-up costs)

MSU-Northern					
Tuition	$ 14,561	$ 45,395	$ 20,426	$ 80,382	
MSU-Bozeman					
Tuition		$ 18,101	$ 20,922	$ 39,023	$119,405
MSU-Northern					
Instruction MSU-Northern	$ 6,624	$ 43,729	68,157	91,040	
Start-up NCMT	$ 5,000			5,000	
Operating NCMT			34,402	34,402	
Start-up MSU-Bozeman	$ 35,249	$ 22,437	5,801	63,487	
Instruction MSU-Bozeman		$ 18,231	9,322	27,553	
				$ 221,482	$221,482
Deficit					**$(102,077)**